DuP-697
Item No. 70645

CAS Registry No.: 88149-94-4
Formal Name: 5-bromo-2-(4-fluorophenyl)-3-(4-(methylsulfonyl)phenyl)-thiophene
MF: C_{17}H_{12}BrFO_{2}S_{2}
FW: 411.3
Purity: ≥98%
UV/Vis.: λ_{max}: 254, 300 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

DuP-697 is supplied as a crystalline solid. A stock solution may be made by dissolving the DuP-697 in the solvent of choice, which should be purged with an inert gas. DuP-697 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DuP-697 in these solvents is approximately 7, 15, and 54 mg/ml, respectively.

DuP-697 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DuP-697 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DuP-697 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DuP-697 is a member of the diaryl heterocycle group of selective COX-2 inhibitors which includes MK-966 (rofecoxib), SC-58125, and celecoxib. DuP-697 is a potent and time-dependent inhibitor of COX-2. \(^1\) When tested on isolated recombinant enzymes, DuP-697 is at least 50 times more potent in the inhibition of COX-2 than COX-1. \(^2\) The IC_{50} values for human recombinant COX-2 are 80 and 40 nM at 5 and 10 minutes, respectively. \(^3\) The IC_{50} for the inhibition of human recombinant COX-1 after the same time intervals is 9 μM. \(^3\) DuP-697 also attenuates the COX-1 inhibitory activity of non-selective COX inhibitors such as indomethacin. \(^4\)

References